

## *Report:*

# THE MOSCOW NUCLEAR SUMMIT AND THE STATUS OF RUSSIA'S SMUGGLING THREAT

by Vladimir A. Orlov

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The nuclear summit held in Moscow from April 19 to 20—among the heads of the eight leading Western states (including Russia)—has now come and gone. Prior to the meeting, there had been at least modest hopes within the nonproliferation community that long-neglected issues of Russian nuclear security might finally be discussed at the highest levels, more effective solutions proposed, and information about them spread by the international news media gathered there. On the eve of the summit, indeed, then-Russian National Security Advisor Yuri Baturin stated publicly that the problem of nuclear diversion was Russia's top-priority security concern.<sup>1</sup>

But rather than fulfilling its great potential, the summit turned largely into a self-congratulatory gathering for leaders facing re-election. In fact, an uncritical atmosphere in regard to Russia and its inability to control the security of its nuclear materials—to say nothing of its warheads—reigned at the Moscow summit. All told, nuclear security issues were discussed for less than two hours on April 20.

This report analyzes the results of the nuclear summit in the context of the enduring Russian smuggling threat. It discusses what modest accomplishments were achieved, what problems remain, and how the G-7 states and Russia plan to go about solving them more effectively.

## RESULTS OF THE SUMMIT

As it turned out, the leaders of the Group of Seven industrialized states (G-7) had agreed with Russia prior to the meeting that there should be no reproaches issued against any participant. Thus, despite a public statement by U.S. Secretary of State Warren Christopher just a week before the summit regarding the unsatisfactory control of materials at Russia's nuclear storage facilities "from Murmansk to Vladivostok," the opposite position was developed during the summit. This uncritical approach was voiced at the final press conference by France's President Jacques Chirac, who glowingly concluded: "While...statements [on the poor safety and security at Russian nuclear facilities] might have had substance four years ago, they can be called nonsense today."<sup>2</sup>

For his part, Russian President Boris Yeltsin agreed to admit "in general" the serious character of nuclear safety and security-related problems in Russia, including the possibility of nuclear diversions and nuclear terrorism. In his speech at the opening of the summit, President Yeltsin pointed out that, like progress in nuclear power engineering, which directly depends on the safe and secure operation of nuclear energy installations, progress in the utilization of weapons-grade nuclear materials—the most sensitive nonproliferation area—directly depends on the success of our efforts in

fighting illicit nuclear trafficking.

Though this phenomenon has, so far, not become a widespread problem, Russia's president pointed out that the industrially-developed countries bear an enormous responsibility for not allowing it to become one of the world's worst problems, along with terrorism and drug addiction. Yeltsin argued that the "G-8" (in which he included Russia) should see to it that measures to prevent illicit nuclear trafficking and to prevent nuclear terrorism are continuously advanced and regularly discussed in "G-8" working bodies.

During the summit, the Russian side also suggested that "the time has come to consider the possibility of developing and adopting international norms and procedures for suing provocateurs, illicit traders, and purchasers of nuclear materials."<sup>3</sup>

Not surprisingly, in a private interview following the summit, Russia's Minister of Atomic Energy Viktor Mikhailov said that he personally was "more than 100 percent satisfied" with the summit's results. He explained that: "Before the meeting, some mass media bodies predicted that Russia would be pressured by G-7. However, we felt no pressure and no pinpricks. On the opposite, it was cooperation that was the focus of our attention."<sup>4</sup>

The absence of conflict at the summit was perhaps predictable. Indeed, the main objective of the Moscow Summit, in the narrowest sense, was to support President Yeltsin's efforts and, in the wider sense, to support the further development of nuclear power engineering for the end of the 20th Century and beyond. In this context, any reproaches of any specific country, especially of Russia, might have seemed irrelevant.

But a telling example of the need for such a discussion came in a comment after the summit by National Security Advisor Baturin, who admitted that the current level of nuclear security in Russia—in particular, nuclear material control, accounting, and physical protection—does not meet acceptable international requirements.<sup>5</sup>

Without mentioning Russia itself, a program for preventing and combating illicit trafficking in nuclear material was adopted as a result of the summit. In the program, all participating states agreed to:

- "regularly share and promptly disseminate... information on nuclear theft and smuggling incidents";
- "exchange information on significant incidents in this area...and establish appropriate national points

of contact for this purpose";

- "foster enhanced cooperation and coordination among our national intelligence, customs, and law enforcement agencies and cooperation with those other concerned countries in order to ensure prompt investigation and successful prosecution in cases of illicit nuclear trafficking";
- "maintain effective national systems of export licensing and control...and encourage and assist other states to do the same";
- "support efforts to define training requirements pertaining to detection of concealed nuclear material, radiation protection, safe handling and transportation of nuclear material, and radiation protection for law enforcement agencies (customs, police) in accordance with their respective tasks and closely coordinate relevant training activities in this area";
- "support the exchange of scientific information and data to permit the identification of the origin, history, and route of seized illicit nuclear material"; and
- "support efforts to ensure that all sensitive nuclear material (separated plutonium and highly-enriched uranium) not intended for use in meeting defense requirements is safely and effectively stored and protected and placed under IAEA safeguards ([or] in the nuclear weapon states, under the relevant voluntary-offer IAEA safeguards agreements) as soon as it is practicable to do so."<sup>6</sup>

While these measures may assist in solving some of the problems related to the threat of nuclear smuggling from Russian facilities, an overview of remaining problems shows that more work is urgently needed on the national, bilateral, and multilateral levels.

## KEY PROBLEMS ON THE AGENDA

It has become clear that the problem of Russian nuclear safety has at least four different aspects, all of which should be on the agenda of the governmental analysts. Among them are: 1) problems in the state system of material protection, control, and accounting; 2) the shortage of financing; 3) problems of interdepartmental cooperation; and 4) criminal threats.

The positive news on physical protection comes mostly from the nuclear weapons side, where there seems to be high security and effective emergency systems in place.<sup>7</sup>

The situation at other military nuclear facilities, nuclear power plants, civilian research reactors, and other fuel-cycle enterprises is more problematic. Here, security is organized on the basis of interdepartmental acts approved by Minatom and the Interior Ministry. Interior Ministry units guard generally the perimeter of facilities. Inside the perimeter technological productions, buildings and other facilities at some facilities are guarded by Interior Ministry units, at others by units of paramilitary guards, and at some by Interior Ministry units and paramilitary units at the same time. Pass regimes and access by people and cargos to these territories have been organized under a number of departmental instructions, as well as under local instructions that reflect the specific character of concrete enterprises.

There are several problems within this framework. The key one is absence of common laws on organization and provision of physical protection at nuclear plants and other facilities with radioactive materials. There are no instructions that set up requirements for physical protection systems or for the operation of particular types of safeguards. At Russian nuclear facilities, it is generally the perimeter that is best protected. But, according to the latest concepts in the safeguarding of nuclear facilities, it should be the production buildings, storage facilities, and other facility buildings that are most heavily protected.

Engineering equipment at check-points and along the perimeter of safeguarded facilities is not terrorist-proof. There are no anti-ram devices at control check-points, and guards themselves remain in the open. Also, there are neither protecting partitions nor bullet-proof glazing on windows. Along the outside perimeters, moreover, there are no restricted roads, ditches, strengthened barriers, or other means of providing additional safety.

The majority of check-points are not equipped with detectors for nuclear materials, metals, or explosives. There are no central safeguard control facilities linking systems within enterprises. Information systems used in safeguarding are outdated; computers are very rarely used. As a rule, existing information systems are located in inappropriate premises that are unprotected against sudden assaults or fire. One of the weakest points of safeguarding is “guard-sentry” and “guard-military unit” communications links. Guards generally make use of city or facility switchboards. International requirements for physical protection systems requiring no less than two continuously functioning channels of spe-

cial communications and safeguarding enhancement forces are almost never observed.<sup>8</sup> When restricted items or nuclear materials are transferred by railway, there are no reliable communications between such convoys and train stations.

Effective safeguarding of facilities is further reduced by the current understaffing of the military units that safeguard nuclear facilities, combined with the sharp differences between the wages paid to plant workers and those paid to the guards. In addition, there are no clear-cut rules on the use of small arms in the vicinity of production and residential premises. In cases where the use of small arms is prohibited, there are no technical or other defensive devices in place to stop a potential criminal.

Though physical protection systems at naval defense facilities and civilian nuclear-powered vessels are based on departmental instructions, they also do not meet modern requirements. Indeed, they have the same drawbacks as physical protection systems of other nuclear facilities.

It is useful to examine at least one case in detail. Why did the theft in Polyarni (near Murmansk) of naval nuclear fuel rods, with about two kilograms of uranium enriched to 28 percent U<sup>235</sup>, become possible? The following description of the storage facility—by Mikhail Kulik, an investigator from Procurator’s Office of the Northern Fleet—makes the problems abundantly clear:

On one side of the Murmansk factory area, are ship repair plants and a group of wood-working enterprises—in other words, an unguarded industrial zone. There are many gaps in the fence. Even if there were none, any child could shake loose the half-rotten boards. There is no control/checking zone on the perimeter of the storage facility. It is easy to get to the back door of the storage facility. In and around the storage area, there are large-item and non-ferrous metal dumps.... The cluttered site gives an impression that the storage unit of the heat-extracting assemblies is not seriously safeguarded, which is perfectly true. The storage facility is equipped with protection against a nuclear accident—for example, a control system against a self-sustaining nuclear chain reaction, a system of fire prevention, and a water-alarm system (the indicator is two elemental contacts at a certain level from the

surface; when the water reaches that level, the contacts close and the system comes into action). But there is almost no such alarm system for the storage facility itself. There is only an elemental contact switch: when the door is open and the pin is knocked out, a signal is sent out.... The signaling system is located on a control panel 100 meters away from the storage site. But if one of the facility's doors is already open (either the entrance or the side one), the other will open without a signal being sent. Moreover, the cable passes through the loaders' cloakroom. In the cloakroom, the switchbox is not even locked. In other words, it is very easy for a criminal to shut off the switchbox in the cloakroom and then do whatever he wants. At the control panel there are two old ladies—the guards. But not always. To get to the site they have to go through the cluttered area, and, in the winter, through gigantic snowdrifts. The women are armed with pistols, which they are afraid to touch. There is also no lighting.<sup>9</sup>

In these circumstances, it is not surprising that the facility was finally vandalized.

While there is no unanimous opinion about the existence of an organized “nuclear and missile” criminal community,<sup>10</sup> when it comes to specific groups and individuals with intentions and possibilities to obtain nuclear materials—even nuclear warheads for blackmail and terrorist purposes—there is little doubt. As General Evgeniy Maslin, head of the Defense Ministry's 12th Directorate (which is in charge of nuclear weapons), states:

We have to pay attention to the problems of counteracting nuclear smuggling since there were a few deviations of fissile nuclear materials at the Minatom enterprises and in the North Fleet. Though all checks have shown that it is impossible to make a nuclear bomb out of those materials, the deviations still took place and we have to watch out.<sup>11</sup>

General Maslin says that the military has carried out preventative training exercises in this regard. He notes that “as a result of those exercises, I gave priority to a question which we had not thought about at all: what if such attempts were made by people who used to work with nuclear warheads? For example, retired officers who are unsatisfied and desperate.”<sup>12</sup> New measures have been adopted, according to Maslin, to guard against

this possibility.

Fortunately, it seems that the current absence of a large-scale demand for Russian fissile materials makes smuggling operations generally unprofitable, as there is a high risk of getting caught even with insignificant amounts of material. For organized criminal rings, the smuggling of rare and rare-earth metals, as well as drugs, brings higher profits and is not as risky. At the same time, demand for “nuclear brains” and know-how seems to be increasing.

Overall, numerous speculations in the press about allegedly serious cases of nuclear smuggling from Russia during 1991 to 1996 have had various implications. One positive outcome has been that the majority of described cases have not been proven. But this frequent lack of proof has given Russian officials, mostly from Minatom, grounds to state that the West has been “deliberately” exaggerating a nonexistent problem. At the same time, these speculations have attracted the public's and, more importantly, the experts' attention to the situation at Russian nuclear facilities. Indeed, it was the increased international (though partly speculative) attention to the problem that made the Military General Prosecutor's Office of the Russian Federation conduct in 1993 to 1995 a series of inspections at the nuclear facilities of Minatom and the Defense Ministry, which purportedly yielded alarming results. New measures have been implemented based on these findings.

## ENHANCEMENT OF INTERNATIONAL COOPERATION

Russia's leadership believes that international cooperation in the area of fighting specific cases of illicit nuclear trafficking should be bilateral and based on the following principles: relevant data should be confidentially transmitted; cooperation should be based only on checked information, expertise of appropriate technical specialists should be included; information regarding specific facts of illicit nuclear trafficking should be strictly controlled and, if necessary, closed to the mass media until investigations are over; samples of detained nuclear material should be examined under international control in the country where this material supposedly has been stolen (since laws of many countries stipulate that samples of stolen or smuggled material should be produced as evidence in court); and sting operations should be prohibited.

Russia insists that law enforcement bodies and spe-

cial services of interested states be especially careful about creating and using so-called "controlled" channels for illegal supplies of nuclear materials, since this might produce an impression of an existing black market for nuclear materials and might increase the demand for fissile materials on the part of criminal rings.

The cooperation between Russia and Germany in this area has made the most progress; the cooperation between Russia and the United States has also been a success, though to a lesser degree. In addition, there have been consultations with officials from the special services of Poland, Romania, Hungary, France, and Great Britain.

Yet, coordination of the Commonwealth of Independent States' (CIS) efforts to prevent nuclear leakage is likely to attract special attention. The Russian policy of "bilateral cooperation" does not stipulate open multilateral discussions of this problem within the CIS framework. Nonetheless, on May 31, 1995, leaders of the 12 CIS member security services meeting in Tbilisi, Georgia, signed a treaty on cooperation in fighting organized crime. In particular, an agreement to carry out cooperation and coordination in fighting nuclear materials smuggling was reached. The 12 states agreed to undertake coordinated investigations and criminal prosecution.

Russian agreements regarding cooperation in the area of counteracting nuclear leakage have been concluded with the special services of Ukraine, Belarus, Moldova, Kazakstan, and Uzbekistan. Their implementation, however, depends largely, on how effective routine coordination will be, which, in turn, depends on cooperation over borders that are generally symbolic and transparent. Today, one of the most acute needs of the Russian export control system—with a view to nonproliferation and the prevention of potential nuclear smuggling—is increased attention to technical equipment on the "outer control circle" (i.e., the customs frontier). It is evident that this will be a costly matter and that it will not be effective if problems in the "inside circle" (e.g., MPC&A) are not resolved.

#### **FURTHER MEASURES TO CURB ILLICIT NUCLEAR TRAFFICKING**

Russia has set up a special governmental commission for issues concerning the nuclear weapons complex. Moreover, the "State Program of the Russian Federation for Creating and Equipping with Physical Pro-

tection Systems Facilities of the Nuclear Weapons Complex, of the Atomic Industry, of Power Engineering and Research Facilities of the Atomic Energy Ministry of the Russian Federation and Facilities of the Defense Ministry of the Russian Federation" stipulates specific measures to improve physical protection at nuclear facilities.<sup>13</sup> A number of laws have been adopted or are being developed to establish regular procedures in such areas as: accounting, control, storage, and physical protection of nuclear materials and facilities; the handling of nuclear weapons and their components during their production, transportation, and storage; licensing procedures for granting access to nuclear materials and for operating nuclear facilities, as well as for moving, transporting, and selling civilian nuclear materials; and control by law enforcement bodies and the General Procurator's Office over implementation of the laws enacted on these issues.

High-ranking Russian officials proceed from the recognition that this is a global problem and that the entire world community should be involved in its practical implementation. They consider the program for countering illicit trafficking in nuclear materials adopted by Russia and the G-7 at the Moscow summit to be critically important. Russia also proposes that the following steps be taken:

- the preparation and signing, if possible, at the Lyon Summit, a protocol for cooperation among the "Eight's" special services in preventing illicit trafficking in nuclear materials;
- the consideration of the idea of concluding an international convention on the control of illicit trafficking in nuclear materials and the prevention of nuclear terrorism;
- the establishment of an international anti-nuclear terrorism center; and
- the discussion in Lyon of the progress achieved towards the convening of an international experts meeting on excess weapons-usable fissile materials.<sup>14</sup>

The following conditions, however, complicate the problem of counteracting nuclear thefts in Russia. First, the secrecy regimes in place at Russian nuclear fuel cycle enterprises that deal with the defense industry make it impossible to estimate or to discuss publicly thefts that have been committed already or measures that have been taken to counteract them. Second, it takes additional funds to counteract nuclear thefts, and they have not been allotted so far. Third, interdepartmental

conflicts currently make it impossible to resolve all aspects of the problem.

Thus, it would be unreasonable to draw the conclusion that the leadership of Russia has set priorities and decided on the means to counteract fissile materials thefts. However, it would also be a mistake to state that this issue is not being worked on. It would be more justified to say that the Russian leadership has recognized that this is a serious problem and will be seeking ways to counteract nuclear thefts in the near future.

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<sup>1</sup> Press conference by National Security Advisor Yuri Baturin, April 18, 1996.

<sup>2</sup> Press conference by Presidents Jacques Chirac and Boris Yeltsin in the Kremlin, April 20, 1996.

<sup>3</sup> Materials of the Summit on Nuclear Safety and Security in Moscow (unofficial translation), April 19-20, 1996.

<sup>4</sup> Author's interview with Minister of Atomic Energy Viktor Mikhailov, April 20, 1996.

<sup>5</sup> Author's interview with National Security Advisor Yuri Baturin, April 20, 1996.

<sup>6</sup> Materials of the Summit on Nuclear Safety and Security in Moscow (unofficial translation), April 19-20, 1996.

<sup>7</sup> There are several lines of nuclear warhead protection, and each line is based on a different physical principle. Vehicles are equipped so that if they are overturned, nuclear warheads would not be damaged enough to cause an accident. The railway cars provide the proper climatic conditions for the weapons. There are a number of rules for nuclear warhead use. For example, one of them runs as follows: the smallest number of people who may work with a nuclear warhead is three. For more on these issues, see author's interview with General Evgeniy Maslin, head of the 12th Main Directorate of the Ministry of Defense, responsible for the Russian nuclear arsenals, *Yaderny Kontrol*, No. 5 (May 1995), p. 10.

<sup>8</sup> *Ezhegodny Otchet Gosatomnadzora*, Moscow, 1994, p. 62-63.

<sup>9</sup> Translated excerpt from article by Mikhail Kulik, "Some Problems in the Storage of Nuclear Materials in the Northern Fleet," *Yaderny Kontrol*, No. 2 (February 1995), p. 12-13.

<sup>10</sup> One of the most mysterious cases in question, in this regard, was the arrest in Moscow on June 7, 1995, of a seller of two kilograms of enriched uranium while an undercover Federal Security Service official handed him over \$600,000. *Kommersant* (Daily), June 10, 1995, p. 14.

<sup>11</sup> Maslin interview in *Yaderny Kontrol*, No. 5 (May 1995), p. 11.

<sup>12</sup> *Ibid.*

<sup>13</sup> This system of measures has been developed and implemented through cooperation among the Atomic Energy Ministry, the Defense Ministry, the Interior Ministry, the Ministry of Foreign Economic Relations, Gosatomnadzor, the General Prosecutor's Office, the Federal Security Service, the External Intelligence Service, and the Federal Frontier Service.

<sup>14</sup> Author's interview with a Russian governmental official, April 1996 (name withheld). See also, Materials of the Nuclear Safety and Security Summit, "Russia's position on the issue of nuclear safety and security," pp. 14-15.